

REMARKS

This Amendment is responsive to the final Office Action mailed September 10, 2002. Claims 38-61 are pending. Claims 50-53, 55-58, 60, and 61 are allowed. Claims 38-49, 54, and 59 are rejected.

Objections to the Specification

In paragraph 1 of the Office Action, the disclosure was objected to as being confusing because Fig. 4 lacks reference to a layer identified by reference numeral 26. Applicant submits herewith a revised Fig. 4 identifying layer 26.

Claim Rejections

In paragraphs 3-6 and 9 of the Action, claims 38-49 were rejected under 35 U.S.C. § 112, first and second paragraphs. Claims 38-49 have been cancelled without prejudice or disclaimer. Accordingly, these rejections are rendered moot.

In paragraphs 7-8 of the Action, claims 54 and 59 were rejected under 35 U.S.C. . § 112, first and second paragraphs. Claims 54 and 59 have been amended to address these rejections.

Applicants respectfully traverse the remaining rejections in the final Office Action. Nevertheless, all rejected claims have been cancelled or amended without prejudice or disclaimer solely for the purpose of expediting issuance of this application. Applicants intend to file a continuation application to pursue the subject matter defined in the cancelled claims. Applicants submit the following comments solely for the purpose of clarifying the record.

In paragraph 3 of the Office Action, the Examiner rejected claims 38-49 under 35 U.S.C. § 112, first paragraph, because the specification allegedly does not provide support for methods in which the deposition step fails to substantially fill the gaps. The Action asserts that "[a] review of Figure 4 indicates that the dielectric material is deposited within the gaps up to the level of layer 26; at this point, according to the figure, the gaps are, in fact, substantially filled." A cursory review of Figures 3-4 reveals that the gaps

extend well beyond the protective layer 26. Accordingly, the Action recognizes that the term "substantially filled" is not tied in any particular way to layer 26, and does not require the gaps to be completely filled.

In paragraph 5 of the Office Action, the Examiner rejected claims 38-49 under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter not described in the specification. The Action asserts that the specification provides no guidance with respect to what is meant by a plasma-based process. In addition, the Action asserts that the language "a plasma based process having both an etching component and a deposition component" constitutes new matter.

In response, Applicants note that the specification makes explicit use of the term "plasma based process" at page 8, lines 12-16 (... [I]t should be recognized that any plasma based process can exhibit sputter etching and deposition mechanisms. When the present inventors discuss sputtering rates in HDPCVD processes, the present inventors intend to convey a sputtering rate in comparison to a base line level of sputtering characteristic of a process such as PECVD...). In addition, the specification is replete with references to plasma based systems such as PECVD (plasma enhanced chemical vapor deposition), HDPCVD (high density plasma chemical vapor deposition), and provides a number of examples of sources for a plasma (ECR, inductively coupled plasma, helicons and electrostatically shielded radio frequency), and specific equipment vendors of plasma based systems. Further, as the Examiner is no doubt aware, the relevant art contains numerous well known systems that utilize some form of a plasma to effectuate work on a substrate. For example, plasmas are used in the semiconductor art in deposition systems, sputtering systems, cleaning systems, and etching systems to name a few. Thus, the term "plasma based process" is well known to skilled artisans.

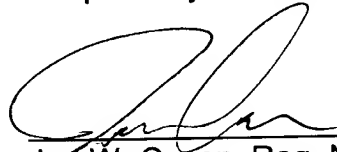
Conclusion

In view of the above, the application is in condition for allowance, which action is respectfully requested. Should the Examiner be of the opinion that a telephone conference would expedite the prosecution of this case, the

Examiner is requested to contact Applicants' attorney at the telephone number listed below.

Although no fee is believed due for this filing, any fee associated with this transmittal may be charged to Deposit Account No. 50-1123.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jed W. Caven', written over a horizontal line.

October 8, 2002

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VERSION WITH MARKINGS TO SHOW CHANGES

54. (Amended) The method of claim 50, wherein the cap layer comprises a material selected from the group consisting of [a silicon material and an oxynitride material] silicon oxide, silicon nitride, or oxynitride.

59. (Amended) The method of claim 50, wherein the remaining portion of the cap layer on at least one wiring line has, in cross section, a rectangular shape having its upper corners etched away.